Amendments to the Specification:

Please amend the paragraph beginning on page 16, line 22 as follows:

Figure 8 schematically depicts another manner in which to direct focused light toward a hole wall. This embodiment of the present invention is based upon an interferometeric design and includes an optical splitter 80 that directs light from the light source 21 to both a moveable mirror 78 and the optical fiber ~~41~~. The light reflecting from both the hole wall and the mirror are combined by the optical splitter 80 and directed to a sensor 22, such as the optical receiver. The moveable mirror 78 is then translated until the intensity of the combined reflected light is maximized. Once the intensity of the combined light is maximized, the distance from the optical splitter 80 to the moveable mirror 78 equals the distance from the distal end of the optical fiber 40 to the hole wall. The probe tip 40 also may be rotated as described above in conjunction with Figure 7 to determine the cross-sectional characteristics of the hole. Utilizing either of the embodiments in Figures 7 and 8 provides quick and accurate measurements of the dimensions of the hole, distinguishes between different materials or layers of the hole, and identifies the interface between the different materials or layers as well as the backside of the hole.